Remarks

In the present application, claims 1 through 9 remain pending. Reexamination and reconsideration is respectfully requested.

Substantive Rejections

1. The Examiner rejected claims 1 to 3, 6 and 9 under 35 U.S.C. §102(e) as being anticipated by Renard et al. (U.S. Patent No. 6,081,691). These rejections are respectfully traversed.

a. Renard discloses a radio frequency reception device enabling simultaneous reception firstly of GPS satellite signals in a first frequency band, and secondly of multi-carrier broadcast GLONASS satellite signals, aiming at addressing the following practical needs:

- allowing both simultaneous reception, on the same device, of GPS and GLONASS signals, compared to the existing satellite reception devices which only allow the reception of a single type of signal. The principle advantage of such a device is its capacity to prevent momentary or definitive cut off of such geo positioning satellite networks, and giving to users the opportunity to manually choose the network from which they want to get the data screened.
- being as inexpensive as possible, compared to what could be the price for buying and using two or three independent satellite receivers simultaneously.

In contrast, claim 1 of the present application recites a dual mode radio frequency receiver which allows simultaneous reception of radio localization signals having one carrier frequency and multimedia signals having multi-carrier frequency to be processed by the receiver.

However, even in the case that the multimedia signals having multi-carrier frequency are processed by the receiver as recited in claim 1 of the present invention could be equated to GLONASS signal types, the following describes why claim 1 is not anticipated by Renard, as asserted by the Examiner.

b. From an implementation viewpoint, the device disclosed by Renard seems to be close to claim 1 of the present invention, in that each comprises effectively a first processing chain for single carrier frequency signals, (like GPS signals, for example), and

a second processing chain for multi carrier signals (like GLONASS signals). These two kinds of signals could be processed having distant frequencies.

However, the device described by Renard does not comprise a single preprocessing module first dedicated to the simultaneous reception of the aforementioned considered signal types, and second, allowing continuous inputting of the two processing chains with single and multi carrier signals, as is recited in claim 1 of the present application.

Moreover, Renard discloses that both of the processing chains (GPS and GLONASS) described by Renard are merged into a single processing chain just before the they are input into the digital signal processor.

Thus, according to Renard, there are not full and totally independent processing chains, as recited by the present invention, permitting both simultaneous processing and screening by the receiver of the two kinds of information: multimedia and geo localization data.

On the contrary, according to Renard, the device implements a single processing chain that is momentarily split into two processing chains from the ML1 mixer in the frequency transposition module of the received signals, for merging again from the digital signal processor (40, figure 1).

Thus, the device disclosed by Renard does not answer the objectives of the present invention aiming at optimizing the consumption and the place in the device, but also optimizing the means implemented for simultaneous processing of signals, as recited in claim 1.

As a first intermediary conclusion, from the implementation viewpoint, the device according to Renard is then different from claim 1 of the present invention and thus does not anticipate claim 1.

c. In addition, the device from Renard is only dedicated to the reception of geo localization signals coming from GPS satellites (having a single carrier frequency L1), or from GLONASS satellite (having multi carrier frequencies L1).

In other terms, Renard device is a mono media receiver which then differentiates from the present invention having for principal objective the simultaneous reception and

processing of multimedia signals (data, audio, video, text...) which may have single or multi carrier frequencies.

More concretely, this difference is critical since it focuses on the fact that the device from Renard can receive and process nearly simultaneously different kinds of signals having distant frequencies, but can screen only data received and process for only one type of satellite, according to a choice previously made by the user manually on its terminal receiver.

On the contrary, the present invention offers the possibility to receive and process simultaneously the different kinds of the received information.

Thus, and as a second intermediary conclusion, from the objectives viewpoint, the device from Renard is different from claim 1 of the present invention.

d. Finally, the device from Renard does not render claim 1 of the present invention obvious.

Indeed, starting from the Renard document, reaching the reception device of the present invention requires the realization that:

- on the first hand, the two satellite geo localization signal processing chains (Renard) could be modified in two signal processing chains for other signals from different kinds and different frequencies (GPS and DAB for example);
- on the second hand, two signal processing chains merging within a digital signal processor (Renard) so that only one type of the geo localization information is screened on the terminal receiver depending on a previous manual choice of the user, can become easily two fully independent signal processing chains from which the output data simultaneously input the terminal receiver for screening the two types of corresponding processed data.

But, the Renard document does not incite the person skilled in the art to think in that way.

On the contrary, even though a person skilled in the art might reach these two realizations, Renard teaches away from them, according to paragraph of the column 8, lines 13 to 26, that states:

- first, the use of two different signal processing chains is only justified by the significant variations between the respective frequencies of GPS and GLONASS signals;
- second, the use of a single signal processing chain for the received signals would be sufficient if the L1 single carrier frequency of the GPS network was sufficiently close to the L1 multi carrier frequencies from the GLONASS or RGIC network.

By contrast, in the present invention, as recited in claim 1, the receiver incorporates two signal processing chains, one each for the GPS signal and the multi media signal, regardless of whether these signals are transmitted in close or distant frequency bands.

e. Conclusion.

Renard does not anticipate claim 1 of the present invention. Applicants submit that claim 1 is in condition for immediate allowance and reexamination and reconsideration is respectfully requested.

Claims 2, 3, 6, and 9 depend from and further limit claim 1. For at least the reasons cited above with regard to claim 1, Applicants submit that claims 2, 3, 6 and 9 of the present application are not anticipated by the cited prior art and are in condition for immediate allowance. Reexamination and reconsideration are respectfully requested.

2. The Examiner rejected claims 4 and 5 under 35 U.S.C. §103(a) as obvious over Renard in view of Leung et al., U.S. Patent No, 5,719,573. These rejections are respectfully traversed.

Claim 4 depends from and further limits claim 3. The Examiner stated that Renard teaches a device according to claim 3 but does not teach the use of a delta-sigma pass-band modulator as recited in claim 4. Leung is cited to provide such a pass-band modulator. However, as noted above, Renard does not teach or suggest the reception device of claim 3 and in fact teaches away from claim 3.

Claim 5 depends from and further limits claim 3. The Examiner stated that Renard teaches a device according to claim 3 but does not teach that the second digitizing means include a "1-bit" quantifier, as recited in claim 5. Leung is cited to provide such a

quantifier. However, as noted above, Renard does not teach or suggest the reception device of claim 3 and in fact teaches away from claim 3.

Applicants submit that the cited prior art does not render claims 4 and 5 obvious and that claims 4 and 5 are in condition for immediate allowance. Reexamination and reconsideration is respectfully requested.

3. The Examiner rejected claims 7 and 8 under 35 U.S.C. §103(a) as obvious over Renard in view of Oyagi, U.S. Patent No, 6,292,232. These rejections are respectfully traversed.

Claim 7 depends from and further limits claim 1. The Examiner stated that Renard teaches a device according to claim 1 but does not teach that the communication RF signal includes the DAB signal, as recited in claim 7. Oyagi is cited to provide that the communication RF signal include the DAB signal. However, as noted above, Renard does not teach or suggest the reception device of claim 1 and in fact teaches away from claim 1.

Claim 8 depends from and further limits claim 1. The Examiner stated that Renard teaches a device according to claim 1 but does not teach that the first frequency band be between 1452.192 MHz and 1491.392 MHz and that the second frequency band is between 1574.42 MHz and 1576.42 MHz, as recited in claim 8. Oyagi is cited to provide such a frequency ranges for the first and second frequency ranges. However, as noted above, Renard does not teach or suggest the reception device of claim 1 and in fact teaches away from claim 1.

Applicants submit that the cited prior art does not render claims 7 and 8 obvious and that claims 7 and 8 are in condition for immediate allowance. Reexamination and reconsideration is respectfully requested.

If the Examiner has any questions regarding this Response or feels that examination of the present application may be furthered by a telephone interview, please contact Applicants representative John Gresens at 612.371.5265.

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